Chapter 15.56

FLOOD DAMAGE PREVENTION

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ARTICLE I. PURPOSE AND DEFINITIONS

15.56.010 Statutory authority. The Legislature of the State of Colorado has in C.R.S. 31-15-101 delegated the responsibility to local government units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore, the City Council does ordain the provisions as set out in this Chapter. (Ord. 1, \$1 (part), 1984)

15.56.020 Findings of fact.

- A. The flood hazard areas of the City are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. (Ord. 1, §1(part), 1984)
- 15.56.030 Purpose. It is the purpose of this Chapter to promote the public health, safety and welfare, and to minimize public and private losses due to flood conditions to specific areas by provisions designed:
 - A. To protect human life and health;

- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the special flood hazard areas assume responsibility for their actions. (Ord. 1, \$1(part), 1984)
- 15.56.040 Methods of reducing flood losses. In order to accomplish its purposes, this Chapter includes methods and provisions for:
- A. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B. Requiring that uses vulnerable to flood, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration and natural floodplains, stream channels and natural protective barriers, which help accommodate or channel floodwaters;
- D. Controlling filling, grading, dredging and other development which may increase flood damage; and
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 1, \$1(part), 1984)

- 15.56.050 Definitions. Unless specifically defined in this Section, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application:
- A. "Appeal" means a request for a review of the community development director's interpretation of any provisions of this Chapter or a request for a variance.
- B. "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.
- C. "Base flood" means the flood having a one-percent chance of being equalled or exceeded in any given year.
- D. "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.
- E. As used in this Chapter, "existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by the City.
- F. As used in this Chapter, "expansion to existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
- G. As used in this Chapter, "flood" or "flooding" means:1. A general and temporary condition of partial or
- complete inundation of normally dry land areas from:
 - a. the overflow of inland or tidal waters.
- b. the unusual and rapid accumulation or runoff of surface waters from any source.

- c. mudslides (i.e. mudflows) which are proximately caused by flooding as defined in paragraph 1(a) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- 2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in 1(a) of this subsection.
- H. "Flood Insurance Rate Map" or "FIRM" means the official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- I. "Flood Insurance Study" means the official report provided by the Federal Emergency Management Agency that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.
- J. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
- K. As used in this Chapter, "manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
- L. "New construction" means a structure for which the start of construction commences on or after the effective date of the ordinance codified in this Chapter.
- M. As used in this Chapter, "manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

- As used in this Chapter, "start of construction" (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L 97-348) including substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.
- O. "Structure" means a walled and roofed building or manufactured home that is principally above ground.
- P. As used in this Chapter, "substantial improvement" means any rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either
- 1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
 - 2. Any alteration of a "historic structure."
- Q. "Variance" means a grant of relief from the requirements of this Chapter which permits construction in such a manner that would otherwise be prohibited by ordinance.
- R. As used in this Chapter, "administrator" means the Federal Emergency Management Agency (FEMA) and "community development director" means the building official or other City employee designated by the City Manager.
- S. As used in this Chapter, "new manufactured home park or subdivision" means a manufactured home park or subdivision

for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by the City.

- T. As used in this Chapter, "recreational vehicle" means a vehicle which is (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projections; (3) designed to be self-propelled or permanently towable by a light duty truck; and (4) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreation, camping, travel, or a seasonal use.
- U. As used in this Chapter, "substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
- V. As used in this Chapter, "The Board of Adjustments and Appeals" shall mean the City Planning Commission and "Community Development Director" shall mean the "City Manager" or his designees. (Ord. 1, §1(part), 1984; Ord. 7, §1, 1989; Ord. 6, §1, 1990)

ARTICLE II. GENERAL PROVISIONS

- 15.56.060 Applicability. This Chapter shall apply to all areas of special flood hazards within the jurisdiction of the City. (Ord. 1, \$1(part), 1984)
- 15.56.070 Flood insurance study and rate map. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for the City of Delta," dated August 19, 1991, with an accompanying Flood Insurance Rate Map is adopted by reference and declared to be a part of this Chapter. The Flood Insurance Study is on file at the Delta City Hall, 360 Main Street, Delta, Colorado. (Ord. 1, §1(part), 1984; Ord. 6, 1991)
- 15.56.080 Compliance. No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations. (Ord. 1, §1(part), 1984)

- 15.56.090 Abrogation and greater restrictions. This Chapter is not intended to repeal, abrogate or impair any existing easement, covenants or deed restrictions. However, where this Chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 1, §1, 1984)
- 15.56.100 Interpretation. In the interpretation and application of this Chapter, all provisions shall be:
 - A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 1, \$1(part), 1984)
- 15.56.110 Warning and disclaimer of liability. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This Chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City, any officer or employee thereof, or the Federal Emergency Management Agency, for any flood damages that result in reliance on this Chapter or any administrative decision lawfully made thereunder. (Ord. 1, \$1(part), 1984)

ARTICLE III. ADMINISTRATION

- 15.56.120 Development permit. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 15.56.080. Application for a development permit shall be made on forms furnished by the Community Development Director and may include but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:
- A. Elevation in relation to mean sea level of the lowest floor, including basement, of all structures;

- B. Elevation in relation to mean sea level to which any structure has been floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 15.56.290; and
- D. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development. (Ord. 1, §1(part), 1984)
- 15.56.130 Community Development Director—Designated. The Community Development Director is appointed to administer and implement this Chapter by granting or denying development permit applications in accordance with its provisions. (Ord. 1, \$1(part), 1984)
- 15.56.140 Community Development Director—Duties

 generally. Duties of the Community Development Director shall include but not be limited to those set forth in Section 15.56.150 through 15.56.190. (Ord. 1, §1(part), 1984)
- 15.56.150 Permit review. Duties of the Community Development Director shall include by not be limited to the following:
- A. Review all development permits to determine that the permit requirements of this Chapter have been satisfied;
- B. Review all development permits to determine that all necessary permits have been obtained from Federal, state or local governmental agencies from which prior approval is required;
- C. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 15.56.310(A) are met. (Ord. 1, §1(part), 1984)

15.56.160 Use of other base flood data.

A. When base flood elevation data has not been provided in accordance with Section 15.56.070 above, the Building Official shall obtain, review and reasonably utilize any base flood elevation and floodway data available from any Federal, state or other source as criteria for requiring that new construction, substantial improvements, or other development in Zone A are administered in accordance with these regulations.

- B. For newly annexed areas of the City which are not shown on the maps or in the study adopted in Section 15.56.070, the flood insurance study for Delta County, Colorado, as adopted by the Federal Emergency Management Agency, the Colorado Water Conservation Board and Delta County, along with its related maps, is hereby adopted for the purpose of the administration and enforcement of these regulations in such areas until amendments to the City maps and study can be adopted. (Ord. 1, \$1(part), 1984; Ord. 7, \$9, 1989)
- 15.56.170 Information to be obtained and maintained. Duties of the Community Development Director shall include but not be limited to the following:
- A. Obtain and record the actual elevation, in relation to mean sea level, of the lowest floor, including basement, of new or substantially improved structures;
- B. For all new or substantially improved floodproofed structures:
- 1. Verify and record the actual elevation in relation to mean sea level; and
- 2. Maintain the floodproofing certifications required in Section 15.56.120(C);
- C. Maintain for public inspection all records pertaining to the provisions of this Chapter. (Ord. 1, §1(part), 1984)
- 15.56.180 Alteration of watercourses. Duties of the Community Development Director shall include but not be limited to the following:
- A. Notify adjacent communities and the Colorado Water Conservation Board prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;
- B. Require that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished. (Ord. 1, §1(part), 1984)
- 15.56.190 Interpretation of FIRM boundaries. Duties of the Community Development Director shall include but not be limited to making interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards; for example, where there appears to be a conflict between a mapped boundary and actual field conditions. The

person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article IV of this Chapter. (Ord. 1, §1(part), 1984)

ARTICLE IV. VARIANCE PROCEDURE

15.56.200 Appeal board.

- A. The Board of Adjustments and Appeals as established by this Code by the City Council shall hear and decide appeals and requests for variances from the requirements of this Chapter.
- B. The Board of Adjustments and Appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision of determination made by the Community Development Director in the enforcement or administration of this Chapter.
- C. In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Chapter, and:
- 1. The danger that materials may be swept onto other lands to the injury of others;
- 2. The danger to life and property due to flooding or erosion damage;
- 3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- 4. The importance of the services provided by the proposed facility to the community;
- 5. The necessity to the facility of a waterfront location, where applicable;
- 6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- 7. The compatibility of the proposed use with the existing and anticipated development;
- 8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- 9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- 10. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
- 11. The costs of providing governmental services during and after flood conditions including maintenance and

repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

- D. Upon consideration of the factors of subsection C of this Section and the purposes of this Chapter, the Board of Adjustments and Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.
- E. The Board of Adjustments and Appeals shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request. (Ord. 1, \$1(part), 1984)

15.56.210 Conditions for variances.

- A. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures below the base level, providing the provisions of Section 15.56.200(C) have been fully considered. As the lot size increases beyond the one-half acre, the technical justifications required for issuing the variance increases.
- B. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this Section.
- C. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - E. Variances shall only be issued upon:
 - 1. A showing of good and sufficient cause;
- 2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
- 3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as

identified in Section 15.56.200(C), or conflict with existing local laws or ordinances.

F. Records shall be maintained of all variance actions including justification of their issuance and shall be included in the annual report submitted to the Federal Emergency Management Agency. The applicant for a variance which is granted shall be given written notice that (i) the structure will be permitted to be built with the lowest floor elevation below the base flood elevation and that the cost of flood insurance will be increased commensurate with the increased risk resulting from the reduced lowest floor elevation, as high as \$25.00 per \$100.00 of insurance coverage; and (ii) that such construction increases risk to life and property. Copies of such notice shall be kept by the City. (Ord. 1, \$1(part), 1984; Ord. 7, \$8, 1989)

ARTICLE V. PROVISIONS FOR FLOOD HAZARD REDUCTION GENERAL STANDARDS

15.56.220 Generally. In all areas of special flood hazards, the standards set out in this Article are required. (Ord. 1, §1(part), 1984)

15.56.230 Anchoring.

- A. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy.
- B. All manufactured homes to be placed within such flood plains shall be installed using methods and practices which minimize flood damage and shall be elevated and anchored to resist flotation, collapse or lateral movements. Methods of anchoring may include but are not limited to the use of over the top or frame ties to ground anchors. The requirements of this paragraph (B) shall not apply when the grade of the ground itself has been elevated by compacted fill above the elevation of the base flood. Special requirements shall be that:
- 1. Over the top ties be provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations, with manufactured homes less than fifty feet (50') long requiring one additional tie per side.
- 2. Frame ties be provided at each corner of the home with five (5) additional ties per side at intermediate points,

with manufactured homes less than fifty feet (50') long requiring four (4) additional ties per side.

- 3. All components of the anchoring system be capable of carrying a force of four thousand eight hundred (4,800) pounds.
- 4. Any additions to the manufactured home be similarly anchored.
- 5. In lieu of the special requirements of subsections 1, 2, and 3 above, an alternative anchoring system may be used if a licensed professional engineer certifies or technical evaluation demonstrates that such system adequately anchor the manufactured home with respect to base flood discharge. (Ord. 1, §1(part), 1984; Ord. 7, §2, 1989)

15.56.240 Construction materials and methods.

- A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage and with electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. (Ord. 1, \$1(part), 1984; Ord. 7, \$3, 1989)

15.56.250 Utilities.

- A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. (Ord. 1, \$1(part), 1984)

15.56.260 Subdivision proposals.

A. All subdivision proposals shall be consistent with the need to minimize flood damage.

- B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- D. Base flood elevation data shall be provided with subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions) which contain at least fifty (50) lots or five (5) acres, whichever is less. (Ord. 1, §1(part), 1984; Ord. 7, §4, 1989)

ARTICLE VI. PROVISIONS FOR FLOOD HAZARD REDUCTION SPECIFIC STANDARDS

- 15.56.270 Generally. In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 15.56.070 or Section 15.56.160, the provisions set out in this Article are required. (Ord. 1, \$1(part), 1984)
- 15.56.280 Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to or above base flood elevation. (Ord. 1, \$1(part), 1984)
- 15.56.290 Nonresidential constructions. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation or, together with the attendant utility and sanitary facilities, shall:
- A. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- B. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
- C. Have structural design specifications and plans for the construction developed and/or reviewed by a registered professional engineer or architect who shall certify that the design and methods of practice for meeting applicable provisions of this Section. Such certification including elevations to which the structure is floodproofed shall be provided to the Building Official. (Ord. 1, §1(part), 1984; Ord. 7, §5, 1989)

15.56.300 Manufactured homes.

- A. All manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
- B. All manufactured homes to be placed or substantially improved on sites in existing manufactured home parks or subdivisions within Zones A1-30, AH and AE that are not subject to the provisions of the previous paragraph shall be elevated so that either (i) the lowest floor of the manufactured home is at or above the base flood elevation, or (ii) the manufactured home chassis is supported by reinforced piers or other foundation elements that are not less than 36 inches in height above grade, and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- C. Manufactured homes shall be anchored in accordance with Section 15.56.230. (Ord. 1, \$1(part), 1984; Ord. 7, \$5, 1989; Ord. 6, \$2, 1990)

15.56.305 Below-grade residential crawlspace construction.

- A. New construction and substantial improvement of any below-grade crawlspace shall:
- 1. Have the interior grade elevation that is below base flood elevation no lower than two feet below the lowest adjacent grade;
- 2. Have the height of the below-grade crawlspace measured from the interior grade of the crawlspace to the top of the foundation wall, not exceed four feet at any point;
- 3. Have an adequate drainage system that allows floodwaters to drain from the interior area of the crawlspace following a flood;
- 4. Be anchored to prevent flotation, collapse, or lateral movement of the structure and be capable of resisting the hydrostatic and hydrodynamic loads;
- 5. Be constructed with materials and utility equipment resistant to flood damage;

- 6. Be constructed using methods and practices that minimize flood damage;
- 7. Be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- 8. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
- a) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
- b) The bottom of all openings shall be no higher than one foot above grade;
- c) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. (Ord. 1 §1, 2002)

ARTICLE VII. FLOODWAYS

- 15.56.310 Generally. Located within areas of special flood hazard established in Section 15.56.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions apply:
- A. Prohibit encroachments, including fill, new construction, substantial improvements and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. If the provisions of subsection A of this Section are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article V of this Chapter. (Ord. 1, \$1(part), 1984; Ord. 7, \$7, 1989)